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ON THE POISONS FOUND IN ALCOHOLIC SPIRITS.

BY A. A. HAYES, M.D., STATE ASSAYER.

[Communicated for the Boston Medical and Surgical Journal.]

FREQUENTLY within the past few years, the public journals have called attention to the existence of poisonous bodies, especially strychnine, in the spirits produced from grains, and no little excitement has grown out of such announcements.

A somewhat extended series of analytical observations on these spirits, from many sources, has convinced me that no good reason for such a statement could be found, and my conclusion has been supported by the testimony of those who are opposed to the manufacture, but who frankly admit that no case has ever fallen under their notice, at the places of manufacture, which would lead to even an inference, in regard to the adding of any deleterious body to the distilled spirits. The addition of non-volatile bodies to the fermented worts, if made, would not contaminate the spirits distilled from them, and it is probable that the supposition, in relation to the use of strychnine for the purpose of increasing the product of whiskey, arose from the *ruse* of a foreman, who wished to conceal the particular characteristics of his ferments in daily use. In low places where such spirits are retailed, drugs which produce narcotic effects, or temporary frenzy, are doubtless resorted to in special cases, while the infusing of pepper or salt is not a very rare occurrence.

Cases of sudden poisoning by the low-priced, common spirits frequently occur, which are not necessarily referable to poisons of foreign origin. Some of the so-called *fusel oils,* produced in the fermentation of mixed grains, either sound or after they have become injured from exposure, act as powerful poisons, and in some states of depressed action of the human system, fatal effects would doubtless follow from the introduction of such oils into the stomach.

As a general statement, the spirits produced in this country to serve as beverages, are remarkable for their purity and freedom from any substances which careful rectification can remove. When, through age and suitable exposure, the oils contained in them have passed into ethereal bodies and thus ripened the spirits, they become equal, in soundness and purity, to any products imported from abroad, and far less deleterious than most of the so-called brandies of the present time.

There is, however, present in the newly-distilled, and, in most cases, in the older spirits, a source of danger, which, so far as I can learn, has been overlooked, or possibly attributed to criminal intention, which should be publicly known, and is of especial interest to the medical profession.

Newly-distilled spirits, of the most common kind, often contain *salts of copper, of lead, or tin,* derived from the condensers, in which the vapors are reduced to a fluid form. The quantity of copper salt contained in the bulk usually taken as a draught, is sufficient to produce the minor effects of metallic poisoning; the cumulative character of these poisons may even lead to fatal consequences. With a knowledge of the fact now stated, instead of resting on a supposition of the existence of an organic poison, in the spirits which have caused sickness, the physician may notice the symptoms of metallic poisoning, in persons addicted to the habit of consuming newly-distilled spirits, and interpose his aid in preventing the fatal termination of vicious indulgence.

Since I first demonstrated the fact of the frequent occurrence of these metallic salts in the more recently manufactured spirits, the investigation has taken a wider range, and the results have proved that as all spirits at one time were new, so with few exceptions—arising from peculiar rectifications—most spirits have been, or are, more or less contaminated by metallic compounds. Old, or more matured spirits have generally lost every particle of the salts once held in solution. Changes in the organic solvent have caused the deposition of the metallic compound, accompanied by the organic matter from obvious sources, and in such spirits the metallic oxide is always found—if it has been present—in the dark-colored matter which has been deposited at the bottom of a cask at rest. This dark deposit has the appearance of, has been mistaken for, charcoal, detached from the charred staves of the casks in which the spirits have been stored.

Of this dark deposit every sample has, on examination, afforded abundance of copper, copper and tin, or copper and lead, even when taken from the finer qualities of foreign spirits.

Observations have been made on the nature of this change from a soluble to an insoluble state. Samples of new spirits have been kept in glass vessels until the whole metallic salt has fallen in dark flocks, leaving the clear fluid free from any metallic compound and perfectly pure.

It appears, therefore, that matured spirits lose their poisonous impregnation during the time necessary to adapt them for use as beverages, and that while the clear, transparent fluid contains no metallic impregnation, a turbid though ripened spirit may prove deleterious through its *suspended* metallic compounds.

In order to avoid the poisonous effects of these salts, perfectly well-ripened and clear spirits only should be used in the preparation of medicines, and when ordered as restoratives, no new or turbid alcoholic fluids should be allowed to enter the room of the patient or hospital. As a further elucidation of this subject, the following more strictly chemical remarks are offered.

The origin of these salts is connected with the production of acids, as well as alcohol, in the fermenting vats. When the wort is subjected to heat in the still, acetic, butyric and other acids rise with the vapor of alcohol, and pass into the condenser, now most commonly made of copper, with masses of solder containing lead. At the instant of condensation, these acids exert a power of corrosion on the metals quite unsuspected, and the salts formed dissolve in the spirit. Where condensers of pure tin are used, no copper salt is found, and a little tin salt takes its place.

With the vapor of dilute alcohol some vesicular vapor of the wort is carried forward, and the dextrine which can be found in the spirit; another portion of soluble organic matter is abstracted from the wood of the cask, and this is often tannic acid. In the subsequent chemical changes, these organic compounds unite with the salts, and fall in the form of a sub-granular, dark matter, seen in colorless spirits of all kinds. In detecting the metals held in *solution*, the extract obtained, after evaporating the spirit, must be destroyed, as usual in toxicological testing, and an acid solution of the oxide obtained, or the extract may at once be mixed with carbonate of soda, and the metal reduced by the blowpipe flame. When the deposit is the subject of trial, the metal or metals appear on fluxing with carbonate of soda, in the inner flame produced by the blowpipe, on charcoal.

16 *Boylston St., Boston, Sept. 17th,* 1860.

SUPPOSED CASE OF ASTHENIA ADDISONII—DISEASED SUPRA-RENAL CAPSULES.

By A. Chapin, M.D., of Winchester.

[Read before the Middlesex East District Medical Society, Aug. 29th, 1860, and communicated for the Boston Medical and Surgical Journal.]

In February last, a man residing in Winchester called on me for professional advice. He was a printer by trade, and was on his way home from Boston, where he worked. On leaving the cars, he walked some forty or fifty rods, to my house, and on entering, threw himself, utterly exhausted, on the nearest seat. His countenance was haggard, and he could with difficulty articulate sufficiently to give an account of himself. He stated that for several months he had been failing in bodily and mental vigor; finding it necessary to select the easiest kinds of work, until he had become unable to do any thing—utterly used up; as I then saw him. His appetite was gone; his system emaciated; his sleep disturbed; his skin sallow; his eyes glaring; his countenance, as before remarked, haggard. He had no pain, but much tenderness on motion or pressure, in the region of the kidneys. His pulse was 60 and feeble.

In the March following, his symptoms had all increased in intensity, and in addition, his forehead had become of a dark-brown color, a very distinct white line of demarcation existing along the edge of the hair. There was much pain in the lumbar region when he turned in bed or exerted himself in any way. His sleep was disturbed by muttering, and unpleasant dreams; his mind was at times weak and fatuous, and he seemed to be dreaming when awake. His face and feet had become œdematous; his prostration still greater, and he had occasional vomiting and diarrhœa. His *urine* had all along presented a normal aspect, and when examined by Dr. E. Cutter, at my request, was found of rather light specific gravity, and to contain a slight excess of uric acid. During the month, Dr. B. Cutter and Dr. Ingalls saw him with me; and I believe both concurred in the view that it was a case of *organic lesion* of the *supra-renal* capsules.

The treatment adopted was entirely of a sustaining nature—vegetables, tonics and chalybeates, alcoholic stimulants, and a nutritious diet; also riding when the weather favored. He bears opiates well, to quiet restlessness at night, and to check attacks of diarrhœa.

Contrary to all expectation, he has gradually improved for several months past—is more animated in his countenance, has a good appetite, takes long rides without much fatigue, walks a mile, goes to church, performs light work, sleeps well, and has less tenderness in the loins. He has, however, the same dark-brown or bronzed countenance still, some general sallowness of the skin, and finds his strength soon give way under any severe muscular effort.

The disease is rare, and has before occurred in but two instances under my observation—one, some eighteen years ago, was presented by a man who had what was then termed black jaundice, but which I have now reason to believe was disease of the supra-renal capsules, from the correspondence of the general symptoms with those usually seen. The other, more recent, existed along with Bright's disease, where there was complete disorganization of the left kidney, by fatty degeneration, involving the supra-renal capsule of the same side.

RESEARCHES UPON THE ERECTILE ORGANS OF THE FEMALE, AND UPON THE TUBO-OVARIAN MUSCULAR APPARATUS, IN THEIR RELATIONS TO OVULATION AND MENSTRUATION.

By Dr. Charles Rouget, Adjunct Professor in the Faculty of Medicine at Paris.

[Translated for the Bos. Med. and Surg. Journal, by Wm. Read, M.D.—Continued from p. 483, Vol. LXII.]

Observers of established reputation have gone so far even as to throw doubts upon the muscular nature of the parietes of the tube, or at least their continuity with the muscular system of the uterus. With much more justice, is there nowhere a doubt of contractile fibres in the appendages of the large ligament, which are immediately connected with the tube and the ovary (edge of the tube, edge of the ovary), and has it never been suspected that we could find in the human female something analogous to the superior round ligament or lumbar, as developed in the majority of the mammalia? Nevertheless, in this particular, no more than in the rest of his organization, man does not depart from the type common to the nearest related species; the muscular systems which we have pointed out in the other mammiferæ exist in the woman, and have the same connections and the same use.

But those anatomists who have directed their studies to human anatomy, have concentrated all their attention upon the structure of the muscular parietes proper, of the uterus, which, in the human female, acquire an extraordinary development. That ingenious anatomist, Deville, who, first of all, gave a good description of the muscular coat of the uterus, and pointed out the prolongations which it sends into the large ligaments, did not think there was either interest or utility in investigating the connections and the insertions of these processes.

As to comparative anatomists, who have made out muscular fibres very plainly, in the large ligaments of the mammiferæ, particularly at the end of gestation (see Pappenheim, in Muller's Archiv., 1840, p. 346), they have only studied the relations of these fibres with those of the uterus itself, overlooking the connections, in other respects very important in a physiological point of view, with the essential organs of generation, the ovary and the first part of the oviduct (the Fallopian tube), so particularly pointed out under the name of appendages to the uterus.

Besides, it is necessary to mention that our ignorance relative to the histological character of contractile tissues, has been the chief cause by which observers have been deceived. I do not speak of the period when we doubted the muscular nature of the true tissue of the uterus in a state of vacuity, but at the present time even, when the microscopic character of the muscular elements seems so clearly established, what anatomist is there, who, without being directed by reflection, or by scientific induction, would dream of finding muscular fibres in the peritoneal membranes, thin, diaphonous, and homogeneous, the true type, apparently, of the coats of serous, conjunctival tissue? And yet comparative anatomy demonstrates, in the plainest manner, that such membranes, more transparent and less resistant than the arachnoid, can not only contain muscular tissue in their substance, but often even are entirely made up of it.

In almost all young vertebrated animals, or those of a small size, to whatever species they belong, a microscopic examination only, allows us to recognize the existence and arrangement of the muscular apparatus which I have pointed out, and in nearly every instance the contractile fibres are very easily distinguished by a series of club-like nuclei, very numerous and close together, and by the action of nitric acid of the strength of 1-100, which, leaving untouched the vessels, the nerves, and the contractile fibres, dissolves the fibrous conjunctival tissue which often cover the last.

In this way, in the full-grown domestic fowl, we can see plainly, by the naked eye, the muscular fibres which radiate themselves in the broad ligament; but in the female pigeon, the young especially, the oviduct is embraced by a *serous* membrane (see Martin Saint-Ange, *Appareils reproducteurs des vertebres*, in *Mem. des avant etrangers*, vol. xiv., 1856) exceedingly thin and diaphonous, and destitute of every kind of striæ or visible fibres. Now place this peritoneal coat under the microscope, and examine with a power of from 250 to 300 diameters, and you will find it to be entirely made up of the same kind of muscular fibres as the broad ligament of the fowl. I will mention also the peritoneal membranes attached to the internal organs of generation of reptiles and the majority of the mammalia; the muscular fibres are very plainly distinguished in them; the study of their arrangement and their connections only presents any difficulty.

In the human female it is altogether different, and an observer, a trained one even, would probably overlook the presence of muscular fibres in the *peritoneal* ligaments of the organs of generation, if he was not prevented by certain important peculiarities. The muscular tissue does not there form a continuous membrane, but a sort of web, with large intermingled meshes of muscular network and nerves, the whole covered and disguised by the fibres of fibrous conjunctival tissue. These contractile fibres are so bound down by this last tissue that it is impossible to isolate them in their fresh state by mechanical force, without altering their texture, to a degree that their elements become entirely irrecognizable, and are necessarily confounded with the filaments of the fibroid conjunctival tissue. There is actually no need of looking to find these fibro-cellules, the pretended characteristics of muscular fibres;* it is difficult enough already to fabricate them in the true fibres of the uterus; it would become altogether impossible in the fibres of the *peritoneal* ligaments.

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* The result of my researches is that these fibro-cellules are an artificial production, arising from alterations and ruptures of the true elements of riband-like muscles, which are nothing more than tubes continued throughout the entire length of a fibre, and made up on an anhistous envelope with

It is to these very fibres that the investigation should be directed. For this purpose it is necessary to take a small scrap taken from the very surface of the membranous ligaments (between the two layers which form this source we find but little except cellular tissue, vessels and nerves), then moisten the preparation with a few drops of weak acetic acid, or what is better, water acidulated with a one-hundredth part of nitric acid. The conjunctival tissue, transformed into homogeneous transparent jelly, permits us to see there, independent of vessels and nerves, a system of fibres from 0^{mm}, 02 to 0^{mm}, 05 in diameter, anastomosing, forming plexuses and intersecting each other in two principal directions. In the infant and the woman who has never had children, it is not easy to determine the nature of these muscular fibres. We there have them evidently confounded, as in very many other points of the economy, with fibres of conjunctival tissue or fine elastic fibres. Their aspect, in reality, is very similar, especially when they have been treated with weak acetic acid, to that which the fibres of tendons or aponeuroses present under the same conditions. It appears homogeneous, indistinctly striated longitudinally, and traversed in all directions by indistinct wavy filaments; the nuclei, elongated and much more separated from each other than in the muscular tissue of the intestine or the bladder, resemble the corpuscles of conjunctival tissue (nuclei of Henle, plasmatic cellules of Virchow). But we notice, in the first place, that after remaining many days in very much diluted nitric acid, these fibres detach themselves with perfect distinctness, whilst all the conjunctival fibrous tissue has disppeared. Moreover, in examining with care, with a power of from 400 to 500 diameters, in a good light, we make out that the striation of the fibres is due to certain fibres or parallel tubes of 0^{mm}, 004 to 5 in diameter, in which there shows, very clearly, here and there, the granular contents characteristic of muscular elements. The obscure wavy filaments are, in the majority of instances, nothing more than folds of the enveloping membrane of the tubes, altered by the preparation and the action of the reagents. By adding to the preparation a few drops of nitric acid, one-fifth strength, and heating to the boiling point, the conjunctival tissue is entirely destroyed, and the nature of the muscular fibres, which are colored deep yellow, becomes more and more evident.

We add, finally, that during pregnancy, and for some time afterwards, there can be no possible doubt of the nature of this system of fibres; the granulations of the contractile substance have be-

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a granular filling, in the midst of which are often, but not *always*, disseminated at variable distances, nuclei elongated into a club-like form, perfectly distinguishable wherever they exist. (See *Comptes Rendus* de l'Acad. des Sciences, December, 1856.) These investigations, extended through all the contractile tissues of the animal series, will be published in the next numbers of the Journal of Physiology.

come more distinct; we notice, also, an increase in diameter of the fibres (on an average to double), and a considerable augmentation of the number of the nuclei, at that time as near to each other as they are in the intestine; but this twofold change results from one and the same cause, because the new elements have developed themselves in the midst of the old, in the very substance of the fibres; their number and arrangement, however, are not diversified.

After having demonstrated that these fibres, which form the frame-work of the so-called *peritoneal* ligaments, have the same nature in the human female and in the mammalia, it remains to demonstrate that they have the same arrangements, the same connections, and that in the internal muscular generative apparatus of the woman we find the same type as in ruminants, rodents, &c., the type of ovario-tubal membranes in reptiles, in birds and in ornithodelph mammalia, modified by a double intersection.

For the study of the muscular system of the organs of generation in the woman, we usually choose the period of pregnancy. It seems to me that the great development which then takes place ought to render the examination more certain. But if it is true that at that time, everywhere, in the great ligaments as well as in the uterus itself, the essential characteristics of muscular tissue may be more easy to demonstrate, it is not equally so in regard to the general arrangement of the whole. The enormous enlargement of the body of the uterus, the progressive obliteration of the great ligaments, which to a great extent it encroaches upon, the distortions, the displacements which are simultaneously produced, bring about this result, that the organs of generation in the human female, at the epoch of pregnancy, depart more than ever from the normal type, from the type common to all mammalia.

At the moment of birth, on the contrary, and even up to the time of puberty, the organs retain the marks of the primitive forms; we still distinguish the cornua of the uterus under the thin layer of muscular tissue which covers and tends to make them indistinct; the true tissue of the body of the uterus is little developed, the connections of the superficial layers with the membranes near by are more marked; in a word, these membranes themselves, thin, transparent, and free from those filaments of adipose tissue, which, at a later period, encroach upon them, present themselves to the observer under the most favorable conditions.

Wherever it seems to make its appearance during pregnancy, there muscular tissue existed at birth, and when one is familiar with the characters of its constituent elements, a study of the general arrangement presents but few difficulties.*

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* By means of low powers (from 6 to 15 diameters), and even by the naked eye, at some points, we can observe the course, and the direction, of the contractile fibres, which the order and regularity of their arrangement distinguish from the confused felting of the conjunctival tissue.

The most convenient method consists in spreading on a glass plate the whole of the organs of

It is there easy to make out that, just as in the other mammalia, the uterus and its appendages are included within the thickness of a large muscular membrane, of which the assumed *peritoneal* ligaments are nothing but dependencies. In the arrangement of the fibres of this membrane, scarcely modified by the slight differences in the form of the uterus, and in the direction of the tube, we recognize the order I have set forth by taking for a type the organs of generation of a she-goat.

The fibres belonging to the system of the round *pubic* ligament spread themselves out in a fan-like form through the whole height of the uterus, and intersect with those of the opposite side; a certain amount of traction, made at the pubic extremity, brings into view their direction. In the utero-sacral ligaments, and the posterior layer of the great ligament, we find insertions on the sacrum and in the sacro-iliac region.

The fibres belonging to the system of the ovarian ligament *(mesoarium)*, pass principally to the posterior face of the uterus. We can easily trace them from where they begin to decussate on the median line. Descending at the superior portion, and ascending at the inferior, they converge towards the rounded cord which we designate by the name of ligament of the ovary: but very numerous at this point only, they occupy the whole extent of the muscular membrane *(serous* of authors), to which the ovary is attached. They do not terminate abruptly at the internal extremity of the ovary. These fibres, with numerous and elongated nuclei which interlace themselves in the stroma of the gland, and enclose the Graafian vesicles in the meshes of their reticulated structure, are probably nothing else than the continuation of those of the ovarian ligament *(mesoarium)*, just as they are, without question, in the ovary of the scaly reptiles and birds. Besides, we can prove, in the most direct manner, that the majority of the fibres of the pretended ligament, just at the corpus spongiosum, run along the inferior border of the gland, and, arrived at the outer extremity, unite in the formation of the muscular cord *(serous ligament* of authors), which connects the fimbriated extremity with the ovary. And again, from the superior border of the utero-ovarian ligament, fibres detach themselves which interlace in the muscular web of the tip of the tube, and go on to terminate themselves on this canal and in the fimbriated extremity.

The study of the fibres which make up the system of insertions for the muscular membrane in the lumbar region, and which are represented in the mammalia by the *anterior and superior round ligament*, presents much more difficulty.

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generation of a little girl (uterus, tube, ovary, great ligaments, round ligaments, and the cord of the ovarian vessels, with the peritoneum which covers them.) We first examine the whole with a lens, in a good direct light, then by transparency, with the assistance of magnifiers of from 20 to 200 diameters, after having wet the preparation with diluted nitric acid of the strength of 1-100, in order to obliterate the fibres of conjunctival tissue.

We there look in vain for a muscular cord similar to that which we so easily perceive in animals, elevating the thin and transparent peritoneum, and running along parallel to the ovarian vessels. Nothing has ever been described, nor, perchance, even ever found analogous to it in the human female. The only difference which in reality there is, however, is that in this case the muscular fibres, instead of being condensed into bands, are spread out into a membrane; and instead of going separately for the length of the vascular cord, they cross it, envelope it, mount with it towards the lumbar region, and gradually become lost in the *fascia propria*, by means of which they are fixed to the posterior parietes of the trunk.

The existence of these fascia being determined, if we now seek to follow their course and their connections, we see that a certain number of them radiate upon the posterior layer of the great ligament, and go in front towards the uterus; that others, raising the peritoneum in the form of a fold, are reflected off towards the top of the ovary and fix themselves to the fimbriated extremity, whilst the greater number, accompanying the vessels as far as the umbilicus of the ovary, a part seem to penetrate the parenchyma of the gland, and a part, crossing the erectile bulb and continuing their way to the extremity of the tube, appear to lose themselves in the contractile envelope of this canal. In the last part of their course, these fibres intersect with those which come from the ligament of the ovary.

[To be continued.]

PASSAGE OF A LARGE STONE THROUGH THE URETHRA OF A BOY TWO YEARS OLD.

Reported by W. M. Turner, M.D., of Petersburg, Va.

On the night of the 29th ult., I was sent for to see a boy who, the woman told me, was suffering from retention of urine. The case was under the treatment of Dr. Weldon Claiborne, of this city, and the woman who called me brought a request from Dr. C. to carry a catheter with me and endeavor to get away the urine; he, the Doctor, being compelled to go into the country before returning to his office, and he had, unfortunately, no catheter with him. I went, and found for my patient a handsome little boy (colored), about 27 months old. He was lying on his back, moaning most piteously—his countenance betraying acute suffering. The pulse was both frequent and quick, ranging in beats to the minute from 125 to 135. Before proceeding to explore the region of the bladder, I was led to examine the chest by the circumstance of accidentally placing my hand over the right lung, and feeling a decided vibratory thrill. Applying my ear for auscultating purposes, I detected a pneumonia in the upper lobes of both lungs, and in the *second* stage; as bronchial respiration and bronchophony were well marked, as well as was dulness on percussion. Upon inquiry, I learned that the child had been sick a month previous, with measles, and, having taken cold when recovering, had been complaining more or less ever since that time.

The bladder, to which I then turned my attention, was enormously distended, protruding and hanging over the pubic arch, somewhat resembling, in miniature, the "*pendulous-belly*" of pregnant women. The epidermis of the abdomen, over the bladder, was quite red and shining, and I was indeed fearful of an artificial opening. The penis was much enlarged, and apparently infiltrated with urine. This, however, was not the case, as subsequent examination proved. To add to the difficulties of the case, there was present a congenital phymosis—rendered ten times more rigid in its contraction by the swollen state of the penis. It was a difficult task, which I then set to work to accomplish—that of drawing off the urine of a boy 27 months old, under circumstances of such pain to the little patient, and of such disadvantage to myself. The swollen and phymosed condition of the penis, and the great irritability of the child, rendered it almost impossible even to make an attempt with the catheter. At the slightest touch the boy would shriek and scream, until I actually thought the strained bladder would rupture before the prolonged muscular contraction would relax. Finally, after much patience and considerable manœuvring, my only assistant being an old lady, who managed to hold the child's hands, I succeeded in passing a small gum catheter through the hard, pursed-up, phymosed ring, and, as fortune would have it, into the urethra. This *feat* I was compelled to perform several times, for the frantic efforts of the child dislodged the catheter, and my labor was thrown away. However, I placed my knee upon the lower extremities of the child, and in this position succeeded in passing the instrument once more into the urethra. Moving it slowly and cautiously downward, I soon had the satisfaction of reaching the bladder, which I knew to be the case by the sudden gush of the pent-up urine through the catheter. At the neck of the bladder, I noticed a slight *gritty* feel as the catheter glided along; it was transient, however, and I thought nothing of it, attributing it to the ring of a cartilaginous stricture, which I had no doubt existed. The boy was instantly relieved, and fell asleep while the urine—an enormous quantity—was flowing. I prescribed nothing for the patient that night, except cold cloths around the penis. The next morning, the first of August, I saw the boy with Dr. Claiborne; we found the patient much refreshed and considerably improved by a good night's rest. The belly, over the region of the bladder, had lost the prominent *bullety* appearance of the previous evening, and appeared more natural, yet it was still very tender. The penis possessed yet its infiltrated look, and resembled much a transparent gelatinous substance—differing only in a *solid appearance.* We found that the boy had already passed his urine once, but in a very unsatisfactory manner, screaming at the top of his voice when the urine reached the urethral canal, and refusing most positively to make further effort. The result was, when we arrived, he was again unable to urinate. Once more my little gum catheter was called into requisition, and our united efforts had the desired effect of bringing away the urine. As I had a case of instruments with me, Dr. C. advised operation for phymosis; suggesting that, perhaps, the rigidity with which it fastened around the glans penis prevented micturition. We divided the pressure with a bistoury and director. The operation was over in a few minutes. After splitting the prepuce, we discovered that the retention of the urine could not have been due to the pressure made over the mouth of the urethra by the phymosis. When I passed the catheter in to empty the bladder, I detected, very plainly, the same *gritty* feel which I had remarked the evening previous. Dr. Claiborne was equally sensible of the peculiar sensation. The touch was decisive; there could be no mistaking the fact of the presence of a foreign body. Dr. Claiborne immediately pronounced the case to be stone. In withdrawing the catheter, which I had used as a sound, I distinctly felt an opposing substance. Dr. C. at this moment remarked, that he distinctly felt, between his thumb and forefinger, a round or irregularly round tubercle in the urethra. After several introductions of the catheter, I finally succeeded in hooking the stone in the fenestra of the instrument, and, with a sudden motion, drew it forward an inch toward the external orifice of the *meatus urinarius.* Here we experienced much difficulty in our work; we dared not split the urethra; and yet it was very difficult to obtain a hold on the stone, which showed a constant tendency to retrocede. Finally, after much patience and manipulation, we obtained a fastening on the stone with a pair of dressing forceps, and extracted it. The boy came near swooning, but soon revived. The following are the dimensions of the stone: Length five eighths, and circumference three-quarters of an inch; weight, nearly forty-two grains; shape, semi-conoidal and semi-cylindrical—the presenting end corresponding to the apex of the cone. An analysis of the stone proved it to be oxalate of lime.

A further examination, using the catheter as a sound, revealed, as we had already suspected, the presence of another calculus in the bladder, and we came to the conclusion that the lithogenesis was hereditary. On inquiry, however, I learned nothing which would warrant the supposition. The boy has not suffered, especially since the time of the passage of the stone. He is now running about, and seems to be lively enough. That he will be troubled again with calculus, there can be no reasonable doubt; how soon first, I cannot say.

The noticeable feature in this case is, that a *stone of such a size* did pass through the urethra of a child two years of age.—*Maryland and Virginia Medical Journal.*

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

JULY 23d.—*Perkins's Tractors.*—Dr. JACKSON exhibited a pair of "Perkins's Tractors," that were so famous, about the commencement of the present century, for the cure of almost every sort of disease, and that imposed upon the credulity of all classes for several years, in Europe as well as in this country. They were sent to Dr. J. for the Museum of the Medical College, by Dr. Jonathan Ware, of Milton, and may be compared, in form, to a stilet about three inches in length, that has been cut longitudinally into two equal parts; one is of brass and the other of steel; one surface is convex and the other flat; one extremity is large and rounded, and from this it tapers off to a sharp point, the greatest width upon the flat surface being one-fourth of an inch. With the tractors, Dr. W. sent a short biographical sketch of Dr. Perkins, with some account of his discovery, the details of which may be found in *Thacher's Medical Biography*, and in the *Encyclopædia Americana.*

AUG. 13th.—*Cancerous Disease of the Bladder.*—Dr. JACKSON showed the specimen, which he had received from Dr. J. H. Blake, of North Auburn, Me. It had been in weak spirit, but the appearances, excepting the color, were well preserved. The cavity of the organ was smaller than natural; parietes much thickened and indurated, and had a scirrhous look; extensive ulceration of the inner surface, ill-defined towards the fundus, but separated by a high margin from the adjacent mucous membrane towards the neck of the bladder. This last membrane was irregular upon its surface, and had what would be generally called a "thickened, fungoid look" and feel. The prostate gland was healthy. The bladder contained, according to Dr. B.'s report, about an ounce of reddish-gray, slimy, grumous liquid; and a small quantity of the same was found in the ureters and in the kidneys, having been forced up from the bladder. The ureters and pelves of the kidneys were dilated; but otherwise, the organs were healthy.

The following is essentially the history of the case, as it was sent by Dr. B. The patient was a farmer, 68 years of age, of good constitution and habits, but always very anxious about himself when he was not perfectly well, and always looking forwards to a suffering old age and painful death. Since October, 1858, he has had occasional hæmaturia, and of late this had been constant. At first, the blood was generally diffused in the urine, but sometimes it came away in clots which were often large, and passed with difficulty. During the last three months he passed a large quantity of solid substance, looking like partially organized fibrin or pieces of placenta that had been retained for a day or two. These coagula never looked as if they came through the ureters; and there never appeared to be any renal difficulty.

When his disease commenced, he became desponding, and manifested the greatest distress of mind, although he said that he had no pain, and did not suffer from his disease. There was no tenderness, nor distress that amounted to pain in the region of the bladder, except during the passage of the coagula; and during the whole course of his disease there was never even a troublesome tenderness until lately; during the last few weeks, however, he suffered considerable pain. He also had command of his urine until lately. About three months ago he took to his bed, although he said that he felt able to be about; his appetite, which had been precarious for some time, soon failed entirely; he took scarcely any nourishment, and he died on the 20th of July, apparently from inanition.

Dr. B. remarks, in his note, upon the tendency of his patient to run after all sorts of quackery, upon the comparatively small amount of local suffering, and upon the influence that his desponding state of mind must have had upon the disease.

Aug 27th.—*Tuphlo-enteritis.*—Dr. Jackson showed a foreign body from the appendix cæci, that he had received from Dr. E. B. Hammond, of Nashua, N. H. It was about as large as the end of the finger, but of an irregular form; surface smooth, compact, and of a brownish color. A smaller one that was also removed, has been analyzed by Dr. Bacon, and found to consist of fæcal matter, mixed with vegetable fibre, four-fifths each, and phosphate of lime, one-fifth.

The following history of the case has been sent by Dr. H. A healthy young man, aged 21 years, had had for two days more or less pain in the region of the pylorus, vomiting, and constipation. A cathartic operated with difficulty, but had the effect of allaying the pain and vomiting, which, however, returned in about twelve hours, lower down in the abdomen, and upon the right side; and became more severe, with tympanites and tenderness, until death; the disease having lasted one week.

On dissection, extensive peritonitis was found, with an abundant effusion; the intestines being agglutinated to each other and to the abdominal parietes. The appendix cæci contained the two foreign bodies, and near them the parietes had sloughed.

Sept. 10th.—*Mitral Disease; Pulmonary Apoplexy; Disease of the Kidneys and Spleen.* Dr. Minot showed the specimens and reported the case.

Ellen Gallagher, 14 years old, entered the Mass. Gen. Hospital, July 11th. She was a pale, emaciated child, with a cough, and dyspnœa on making any exertion. She said she had been well until about a year ago, when she took cold, from exposure. In the course of the last winter she was confined to her bed by pain, but she could not tell what was the nature of her complaint; she afterwards became an outpatient, at the Dispensary, where her disease was called "rheumatism." The catamenia appeared, for the first and only time, a year ago. At her entrance, she coughed much, particularly at night, and expectorated a small quantity of frothy mucus, often streaked with blood; there was some dulness in the left back, but no râles were heard anywhere. There was a loud systolic murmur, at the apex of the heart, which was heard all over the back, even at the right side.

The cough was much relieved by expectorant and sedative medicines, of which naphtha seemed to be of essential service. On the 15th of July, a crepitant râle was heard below the inner extremities of both clavicles, the expectoration increased somewhat, and the patient complained of much pain in the shoulders, particularly the left.

The râle, taken in connection with the expectoration, and with the fact that the girl's mother had died of phthisis, led Dr. M. at first to suppose that there was tuberculous infiltration at the apices of the lungs, but the subsequent extension of the râle over the whole back, made it evident that the sound proceeded from œdema. There was also dulness on percussion in the lower part of both backs. On the 26th, she suffered severely from vomiting and purging, caused by eating some apple-pie, surreptitiously brought to her by some friend. From this time all her symptoms were aggravated. About the middle of August, she began to have œdema of the face and legs, increased dyspnœa, and palpitation, and the urine was loaded with albumen. The symptoms increased in severity, the dyspnœa and palpitation became extreme, she expectorated, freely, a dark-chocolate colored mucus, with some pure blood, and was released from her sufferings by death, September 7th.

The autopsy was made by Dr. Ellis, who reports that there were more than two pints of bloody serum in the left pleural cavity, the pulmonary surface of which was covered with a recent false membrane, and about half a pint of clear fluid in the right. In the upper and lower lobes of the right lung were firm, dark-red portions, where blood had been effused. The same appearances, but more extensive, were found in the anterior and posterior parts of the left lung; a small portion of the lower part of this lung had an older appearance than the rest, being of a dull-red color, and surrounded by a yellow line, which had a purulent look. There were no tubercles. The heart weighed 8½ ounces. In the right ventricle were a number of old, yellowish, rounded coagula, the largest being not more than half an inch in diameter. This coagulum contained a cavity filled with a puriform fluid, which was composed of minute globules and granules, like those usually found in softened fibrin. Attached to the edge of the mitral valve was a large, irregular, but smooth, firm, cretaceous mass, perhaps a third or half an inch in diameter. Several of the chordæ tendineæ were ruptured, and others were much thickened. Much fibrin was deposited upon the valve, and the surface of the auricle. The aortic valves were perhaps a little thickened. The spleen weighed 11½ ounces. At each extremity was an irregular, yellowish-white mass, from one to two inches in diameter. There were several similar, but smaller formations elsewhere. Masses of this same character were found in the right kidney, just beneath the surface, the largest measuring an inch superficially, and a quarter of an inch in thickness. One reddish point was formed in the left ovary; both were, however, quite smooth.

Dr. M. remarked that the patient's death was undoubtedly hastened by the vomiting and purging caused by eating indigestible food, and that the appearances presented by the spleen and kidney, perhaps the result of extravasated blood, were such as had been frequently pointed out by Dr. Jackson in cases of obstructed circulation, arising from disease of the heart. The condition of the ovary might be supposed to be the result of the first and only appearance of the catamenia. The pain in the left shoulder was doubtless owing to the inflammation of the pleura.

Sept. 10th —*Wound of the Brachial Artery.*—Dr. Cabot reported the case. A man, 36 years old, entered the Massachusetts General Hospital, Sept. 4th, who had been injured three and a half weeks previously, while at work holding a "set hammer," which was resting on a piece of iron, and struck by a sledge. A sliver of steel flew from the hammer, and entered his arm. Arterial blood immediately flowed in a gush, which he arrested by squeezing together the sides of the wound. A tight bandage was afterwards applied. The wound was about three inches above the bend of the elbow, over the edge of the biceps muscle, and in the course of the brachial artery. The arm was indurated from the elbow to the axilla. The pulsation of the artery could not be felt below the wound, nor in the indurated part. There was severe pain in the part, and numbness in the thumb, and fore and middle fingers. The fore-arm was flexed, and immovable. The piece of steel could be felt with a probe.

The forceps were introduced for the purpose of withdrawing the foreign substance, but the attempt was desisted from, owing to a gush of arterial blood which took place. A tourniquet was applied in the axilla, and an incision was made an inch and three quarters below, and two inches above the wound. A great quantity of coagula came from the wound, and it was found that the piece of steel had penetrated the coats of the artery, where it was firmly imbedded. It was removed, and the artery was tied above and below the wound, the ligatures being an inch and a quarter apart, and the wound in the artery about three quarters of an inch in length. There was considerable hæmorrhage at the time of the operation. A wet compress was applied to the wound, and the limb was bandaged from the hand to the axilla. The bit of steel was about the fortieth of an inch in thickness, at the thickest part, about half an inch in diameter, and shaped like the scale of a fish. Pulsation was felt at the wrist on the 8th, and the patient did well.

Bibliographical Notices.

The Institutes of Medicine. By Martyn Paine, A.M., M.D., LL.D., Professor of the Institutes of Medicine and Materia Medica in the University of the City of New York. Fifth Edition. New York: Harper & Brothers. 8vo. Pp. 1109.

We have received the fifth edition of this popular and well-known work. A number of pages have been added in the form of a supplement. It is unnecessary to make any remarks upon a work which has been so long before the public.

Lectures on the Diseases of Infancy and Childhood. By Charles West, M.D. Third American from the Fourth Revised and Enlarged London Edition. Philadelphia: Blanchard & Lea. 1860.

We should have noticed this third edition of Dr. West's work long ago, but console ourselves with the reflection that the author is too well known to make it necessary to mention him, and we do it now merely as an act of courtesy, feeling that no words of ours can increase or diminish his reputation.

Nature in Disease, and Miscellaneous Writings. By Jacob Bigelow. Second Edition. Enlarged. New York: S. S. & W. Wood.

It is unnecessary to repeat what has already been said concerning this work. The fact that it has reached a second edition proves that it has met with the welcome it deserved.

Rational Medicine. By Jacob Bigelow. Second Edition. New York: S. S. & W. Wood. 1860.

We are glad to see the second edition of this work. Even those who cannot go so far as the author, in their skepticism, must bear witness to the general truth of the contents.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, SEPTEMBER 27, 1860.

Medical Department of the University of Michigan.—The following extracts from the Annual Report of the Regents of the Michigan University, contain truly "liberal and elevated views," and should be published in every journal and newspaper in the land.

"As a University, our great mission is to promote the cultivation of science to the widest extent and in the most thorough manner, in all our departments. We are not to receive our standard from institutions where the pecuniary considerations involved in a large number of students determine the course of instruction. Nor in any department are we to sacrifice the interests of learning, the honor of the University, and the public good, to private considerations. In filling vacant chairs, we are to seek for the best men. In inquiring what improvements can be made, we are to keep steadily in view the real purposes for which the University has been established and endowed. Our three departments may thus be developed more and more on a genuine and solid basis; and in the end we shall reap our reward. The history of all institutions of learning, both abroad and at home, proves most conclusively this great truth, that those institutions which have drawn together the most eminent men as professors, and have pursued the most thorough methods of instruction, have acquired the widest and most enduring reputation, and have been frequented by the largest numbers. * * *

"An illiterate clergyman, by his practical acquaintance with the simple gospel, may be a minister of mercy to the poor, and may even instruct the wise. In law, amid various grades of practice, there may be some which do not require high talent or extensive learning. But in the medical profession there are no grades that admit of ignorance and unskilfulness. No profession demands such a wide range of science and such consummate skill, and every practitioner here meets with the same cases, and is subject to the same demands upon his knowledge, his art, and his experience. * * * Sciolists in medicine are more dangerous than in any other profession, for all physicians deal with the same subjects, and in their practice may invade life instead of merely affecting modes of faith and worship or endangering property."

"Most of the medical schools, although incorporated, partake of the nature of private enterprises. Some, perhaps, are undertaken to aid the private practice of the professors. Others certainly prove very profitable in a pecuniary way. Their influence has been rather to lower than to elevate the standard of medical attainment, and to introduce into the profession, under the most honorable title of Doctor of Medicine, many ignorant and incompetent men. A low standard of professional attainment, thus created in our country, forms a formidable obstacle to all attempts to elevate the schools. * * * As yet, in our country, our medical schools have been very much of the same character; and the experiment remains to be fully tried of placing a school of a lofty standard in competition with the ordinary schools. Our own medical school has made some worthy improvements, and surely, as far as the experiment has gone, has no reason for discouragement."

LONDON AND ITS HEALTH.—London, says the Registrar-General, now covers 121 square miles—a square of 11 miles to the side. It is equal to three Londons of 1800. It increases at the rate of 1000 a week, half by births (their excess over deaths), and half by immigration (its excess over emigration). It is remarkable that in London, one in six of those who leave the world, dies in one of the public institutions—a workhouse, hospital, asylum, or prison. Nearly one in eleven of the deaths is in a workhouse. For the improvement of the health of London three things are to be aimed at—pure air to breathe, pure water to drink, and a healthy soil to live on. The Registrar-General observes that there are above 2000 medical men in London and its vicinity; but they are chiefly employed in treating disease—the art of preventing it is not cultivated; it is not taught in any of our medical schools: it is not formally the subject of examination in our universities. The father of a family does not go to the doctor and say, "How can I preserve my health, and make my children well and vigorous, and develope all their faculties to the fullest extent?" Imagine the 2000 members of the most enlightened profession in the country employed in instructing the people in the way of a healthy life. How many thousands of lives would be saved every year in London! How much better and happier the population would be! A beginning of a movement has been made in the right direction, under Sir B. Hall's Act. Medical health officers are appointed in the various districts of London, and many of them are working courageously against ignorant opposition, with success. They deserve public approbation, for they have done quietly a great deal of good work, and it is probable have saved many lives and prevented much sickness.—*London Times.*

A NEW COLLEGE FOR THE TRAINING OF IDIOTS.—In 1857, we favorably noticed a little work by Mr. Abbott, M.A., of Queen's College, Cambridge, in which he urged the utility of a Government grant for the education of the twenty thousand idiots, now placed in our lunatic asylums or living at home. Mr. Abbott's appeal met with no response, and we are glad to find that, instead of waiting for parliamentary support, he has put his shoulder to the wheel, and opened at Lansdowne House, Greenwich, an institution for the training of idiots of the upper classes. To reclaim the idiot, he must be tutored by a more impartial authority than can be found in the family circle; by a tutor well acquainted with the wonderful cunning by which the idiot evades discipline, and that tenacity of will by which he has all his life shaped his family to his own imperfect ends. We are glad to find that the institution is placed under medical supervision, and that two physicians, Dr. H. Osman and Dr. J. R. Hancorn, reside on the premises.—*London Lancet.*

IMPROVED TASTE TO COD-LIVER AND CASTOR OILS.—Cod-liver or castor oil, shaken up with an equal volume of water distilled off the leaves of the wild cherry tree, in a manner similar to that directed in the Edinburgh or Dublin Pharmacopœia for cherry laurel water, and left to rest forty-eight hours before separation, acquires by this simple operation an extremely sweet perfume and agreeable taste of almonds; the taste remains as long as the digestion lasts. Oil flavored in this way could be taken by many patients who reject it in its natural state. Castor oil is not affected in its purgative action by this process.—*Louisville Monthly Medical News.*

TUMBLETY FINED.—This well-known character, we are happy to perceive, has received his due deserts at last. We never met with an individual who excelled him in effrontery, nor did we ever, in all our experience, witness a more thoroughly uneducated man, more idolized we were almost going to say, by the public than he, during the time he remained in this city. His surgery, or consulting rooms, as he was pleased to term them, were crowded, and guineas were poured into his lap by parties who paid with grudge the smaller fees demanded in ordinary practice by the regularly-educated physician, or, as not unfrequently happened, never paid them at all. We notice, in one of our exchanges, that he has been fined, at St. John's, N. B., £20, and costs, amounting to 30s. 6d. additional, for assuming the title of M.D., contrary to the provisions of the Medical Act. We are not acquainted with the medical law of that province, but we would wish to know if there is not a law in force there, under which he could have been convicted for practising without a license.—*British Am. Journal.*

BIRTHS AND DEATHS IN PHILADELPHIA, IN 1859.—The total number of births in this city during the last year was 14,832, of which 7,669 were males, and 7,163 females.

The number of deaths within the same period was 9,742, of which 5,160 were males, and 4,582 were females. Of the above, deducting the stillborn, of whom there were 658, there were males, of 20 years and upwards, 1,917; under 20 years, 2,508; of females, of 20 years and upwards, 1,699; under 20 years, 2,249. The above list comprises 1,505 deaths by pulmonary phthisis; 544 by inflammation of the lungs; 520 by convulsions; 408 by cholera infantum; 366 by marasmus; 267 by typhoid fever; 234 by dropsy of the brain; and 330 by inflammation of the brain. The mortality from cancer was 132.—*N. American Medico-Chirurgical Review.*

NEW SURGICAL APPOINTMENT.—Mr. R. K. BROWNE, a member of the class which first graduated at the New Medical College (Long Island College Hospital) in Brooklyn, immediately after obtaining the degree of Dr. was appointed Resident Surgeon to the College Hospital, and is now, we learn from an exchange, satisfactorily accomplishing the duties of the office.

THE CLIMATE OF MINNESOTA FOR CONSUMPTIVES.—Dr. B. S. Lawson communicates to the *Cincinnati Medical and Surgical News* an interesting letter from one of his patients who had left his home in Cincinnati and spent some months in Upper Iowa and Minnesota, with great relief to his phthisical symptoms. In some remarks introductory to this letter, Dr. L. says:—

"I know of many very flattering reports in reference to the results following a removal to the cold region of the north-west, and the effect has not been merely temporary, but a return to perfect health; unless in cases in which disorganization of the lungs had progressed to so great a degree as to make such a thing impossible. Of the truth of this, we cannot be very skeptical, for we know that *regularity* of temperature is peculiarly advantageous in all pulmonary affections, and without it we find it to be extremely difficult to arrest the progress of the disease, even for a short time, to say nothing of the impossibility of effecting a perfect cure.

"The climate of Minnesota is peculiarly bracing, and the seasons are not subject to frequent and sudden changes, as is this portion of our country, in which consumption is yearly making such fearful inroad on human life and human happiness. Instead of enervating both body and mind, it produces a directly opposite result; and those who go there at once find their appetites sharpened, their strength increased, and their mental powers restored to their original standard."

THAYER'S FLUID MEDICINAL EXTRACTS. *Messrs. Editors,*—I feel it a duty, as well as pleasure, to express, through your columns, the high opinion I have formed of the preparations named above. Heretofore, my confidence in fluid medical extracts has not been great, having found them unreliable as to purity and strength, and frequently totally inert. But after giving those manufactured by Dr. Thayer a fair trial, I can most fully endorse the assertions made in the preface to his catalogue, that "they are uniform in strength, produce their peculiar effects from a small dose, are easy of transportation, always ready for use, and will keep for any length of time." I. G. BRAMAN.

Brighton, September 24th, 1860.

DR. W. H. DONNE has been elected Superintendent of the Louisville Marine Hospital.——Dr. John H. Tate, of Cleveland, Ohio, has been appointed to the Chair of Obstetrics in the Cincinnati College of Medicine and Surgery.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, SEPTEMBER 22d, 1860.

DEATHS.

	Males.	*Females*	*Total*
Deaths during the week,	47	53	100
Average Mortality of the corresponding weeks of the ten years, 1850–1860,	43.8	43.4	87.2
Average corrected to increased population,	..	..	97.3
Deaths of persons above 90,	..	..	..

Mortality from Prevailing Diseases.

Phthisis.	Chol. Infan.	Scar. Fev.	Pneumonia.	Measles.	Smallpox.	Dysentery.	Typhoid Fever.
19	19	1	6	1	1	3	1

METEOROLOGY.

From Observations taken at the Observatory of Harvard College.

Mean height of Barometer,	30.093	Highest point of Thermometer,	77°
Highest point of Barometer,	30.370	Lowest point of Thermometer,	46°
Lowest point of Barometer,	29.728	General direction of Wind,	West.
Mean Temperature,	63°.9	Whole am't of Rain in the week	2.641 in.

NOTICE.—We are requested to announce to the members of the Mass. Med. Society that "No. 3, Vol. I. of the Publications of the Mass. Med. Society" was mailed from this office on Wednesday, Sept. 26th, and to call their attention to the advertisement of the adjourned Annual Meeting of the Society.

COMMUNICATIONS RECEIVED.—Passages from a Surgical Note-Book.

BOOKS.—Memoranda Medica, or Note-Book of Medical Principles; for the use of Students. By Henry Hartshorne, A.M., M.D. Philadelphia. (From the Publishers.)

Deaths in Boston for the week ending Saturday noon, September 22d, 100. Males, 47—Females, 53.—Anæmia, 1—apoplexy, 1—congestion of the brain, 1—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 2—cancer (of the breast), 1—cholera infantum, 19—cholera morbus, 3—consumption, 19—croup, 1—debility, 1—diarrhœa, 4—puerperal disease, 1—dropsy, 2—dropsy of the brain, 4—drowned, 1—dysentery, 3—erysipelas, 1—scarlet fever, 1—typhoid fever, 2—gastritis, 1—disease of the heart, 2—homicide, 1—intemperance, 2—disease of the liver, 2—congestion of the lungs, 1—inflammation of the lungs, 6—marasmus, 2—measles, 1—premature birth, 1—scalded, 1—smallpox, 1—suicide, 1—syphilis, 1—tabes mesenterica, 1—teething, 2—tumor (of the liver), 1—unknown, 3.

Under 5 years, 53—between 5 and 20 years, 3—between 20 and 40 years, 25—between 40 and 60 years, 11—above 60 years, 8. Born in the United States, 70—Ireland, 23—other places, 7.